



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,008	06/29/2001	Shinichi Hara	Q65241	5699

7590 04/07/2004
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

HWU, DAVIS D

ART UNIT PAPER NUMBER

3752

DATE MAILED: 04/07/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,008

Applicant(s)

HARA, SHINICHI

Examiner

Davis Hwu

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 27-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 8-10, 13-17, 20, 21 and 27-36 is/are rejected.
- 7) ☒ Claim(s) 11, 12, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

1. Applicant's request for reconsideration of March 19, 2004 is acknowledged and entered as paper number 13.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Applicant's remarks have been fully considered and are persuasive. This new office action is therefore given.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 8-10, 13-17, 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Gamst.

Gamst shows a cleaning nozzle comprising:

- ejection nozzle portion having a minimum diameter portion d and a trumpet-shaped portion formed by a curved surface located upstream of the minimum diameter portion, an inclination angle of a tangent to the curved surface progressively decreasing toward the minimum diameter portion (see Figure 1);
- a gas ejection port formed along the curved surface and opened to an intermediate part of the trumpet-shaped portion (see Figure 1);

Art Unit: 3752

- a cleaning liquid ejection port formed inside of the gas ejection port (see Figure 1);
- wherein a gas jet flow passing through a central part of the gas ejection port converges at a point upstream of the minimum diameter portion as recited in claim 9 (see Figure 1).

Gamst does not specifically disclose the gas being ejected from the gas ejection port at a speed higher than that of the cleaning liquid, however, since the surface area of the gas ejection port is smaller than that of the cleaning liquid ejection port, the gas will be ejected from the gas ejection port at a speed higher than that of the cleaning liquid from the cleaning liquid ejection port (see Figure 1). The use of a powder material as recited in claim 7 is a statement of intended use since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Claim Rejections - 35 USC § 103

6. Claims 27-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gamst.

Although Gamst does not disclose allowing a small amount of clogging prevention liquid to be injected as recited, it would have been obvious to one having ordinary skill in the art at the time the invention was made that clogging prevention liquid could be fed into the air inlet 3 which would then be injected into an intermediate section of the pressurized gas flow passage between a cleaning material injection port and the

Art Unit: 3752

cleaning nozzle. The amounts of clogging prevention liquid to be injected and the duration of the injections as recited in claims 29-36 are obvious matters of user choice depending on the amount of material formed in the surfaces that need to be removed by the clogging prevention liquid.

Allowable Subject Matter

7. Claims 4, 5, 11, 12, 18, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 1-7 are allowed.

Response to Remarks

9. Applicant's remarks of March 19, 2004 have been fully considered and are persuasive. The examiner agrees with the Applicant's remarks regarding 35 USC rejection of claim 1, however, after taking another look at the prior art, the examiner has determined that the gas ejection port of Gamst has a smaller surface area than that of the liquid ejection port, and thus, the gas will be ejected at a higher speed than that of the liquid being ejected. Claims 27-36 are withdrawn because the device of Gamst is capable of accepting an amount of clogging prevention liquid for a predetermined period is so required by a user.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davis Hwu whose telephone number is 703-305-1663. The examiner can normally be reached on M-F 7:30 AM to 4:00 PM.

Art Unit: 3752

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Y. Mar can be reached on (703)308-2087. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0861.

A handwritten signature in black ink, appearing to read 'Davis Hwu', with a stylized, flowing script.

Davis Hwu